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Practices for freezing, storage, and shipping Source Plasma

Roger Brinser, Sr. Director
Regulatory Affairs

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Overview—Source Plasma

- Time Held before Freezing
- Freezing Temperature
- Plasma Storage Temperature
- Shipping Temperature

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Time Held Before Freezing

- 21CFR 640.69(b) *Storage* **immediately after filling**, plasma intended for manufacturing into injectable products shall be stored at a temperature not warmer than -20° C…..
- European Pharmacopoeia (EP) 0853: When obtained by plasmapheresis, plasma intended for the recovery of proteins that are labile in plasma is frozen by cooling rapidly at -30° C or below **as soon as possible** and at the latest within 24 h of collection
- BioLife Requirements: Place plasma units in freezer **within thirty (30) minutes** of receipt in plasma processing. Note—the 30 minute time frame should be **used as a guide** to ensure plasma is placed in freezer without undue delay.

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Freezing Temperature

- CFR and EP requirements are consistent with previous slide
- BioLife Requirements:
  - Source Plasma for further manufacture of US products meet CFR requirements and are placed in a freezer operating at -20° C or colder.
  - Source Plasma for further manufacture of European Union (EU) non-labile proteins meet EP requirements and are placed in a freezer operating at -20° C or colder.
  - Source Plasma for further manufacture of EU labile proteins meet EP requirements and are placed in a freezer operating at -30° C or colder.

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Plasma Storage Temperature

- 21CFR 640.69(b) *Storage* immediately after filling, plasma intended for manufacturing into injectable products shall be stored at a temperature not warmer than -20° C…..
- European Pharmacopoeia (EP) 0853: Store and transport frozen plasma at or below -20° C…
- BioLife Requirements:
  - **All** Source Plasma for further manufacture are stored in a freezer operating at -20° C or colder.

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Shipping Temperature

- 21CFR 640.76(2)(b): *Shipping Temperature* If Source Plasma for manufacture into injectable products is exposed inadvertently to a shipping temperature warmer than -5°
- European Pharmacopoeia (EP) 0853: Store and transport frozen plasma at or below -20° C…
- BioLife Requirements:
  - Transport at or below -20° C. Acceptance based on US and EP requirements.

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Other Points to consider

- Current CFR definition of “inadvertent exposure” (i.e., an unforeseen occurrence in spite of compliance with good manufacturing practices) is not clear.
- Current CFR allows for one episode warmer than -20° C for up to 72 hours but does not allow for multiple episodes of shorter duration.
- Current EP Monograph does not allow for “Source Plasma Salvaged” definition.

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Conclusions

- Baxter BioScience and BioLife specifications are based on the CFR and EP regulations
- Freezing and storage conditions of -20° C or colder appear suitable for Source Plasma
- Appears to be no safety or quality related issues for finished product